WHAT IS CLAIMED IS:

1. A semiconductor laser device comprising:

a carrier configured to have an insulating characteristic and a high heat conductivity;

a multi-layer film including a gold thin film mounted on the carrier;

a semiconductor laser element having a p-side electrode, an n-side electrode, and an end-face, configured to emit a laser beam, and mounted on the multi-layer film via the p-side electrode; and

a temperature measuring element having a first-side and a second-side, configured to measure a temperature of the semiconductor laser element, and mounted on the multi-layer film via the second-side, wherein

the semiconductor laser element and the temperature measuring element are placed in a proximity to facilitate a transfer of heat from the laser element p-side to the measuring element second-side without use of a submount.

2. The semiconductor laser device according to claim 1, wherein:

the carrier comprises at least one of a Si, AIN, diamond and cBN polycrystal material.

3. The semiconductor laser device according to claim 2, wherein:

the multi-layer film is arranged to form a electrical conducting pattern having a laser mount portion, a measuring element mount portion, a laser n-side portion, and a measuring element first-side portion;

the semiconductor laser element n-side electrode is connected to the laser n-side portion via a conductive connection; and

the temperature measuring element first-side is connected to the measuring element first-side portion via an other conductive connection.

4. The semiconductor laser device according to claim 3, wherein:

the conductive connection comprises a plurality of conductive wires, and

the plurality of conductive wires are joined at substantially equal intervals on the laser n-side portion of the semiconductor laser element.

5. The semiconductor laser device according to claim 3, wherein:

the laser n-side portion is placed on a portion of the carrier closest to the laser device end-face.

6. The semiconductor laser device according to claim 3, wherein:

the laser n-side portion is placed on a portion of the carrier opposite to the laser device end-face.

7. The semiconductor laser device according to claim 3, wherein:

the carrier comprises a conductor rod with a rod thermal conductivity higher than a thermal conductivity of the carrier.

8. The semiconductor laser device according to claim 1, wherein:

the gold thin film is has a thickness equal to or greater than 5 μm.

9. The semiconductor laser device according to claim 1, further comprising:

a monitor element mounted on the carrier to monitor the laser beam.

10. The semiconductor laser device according to claim 1, wherein:

a resonator length of the semiconductor laser element is equal to or greater than 1,000 μm.

11. The semiconductor laser device according to claim 9, wherein:

at least one of the semiconductor laser element, the temperature measuring element, and the monitor element is electrically independent from an other one of semiconductor laser element, the temperature measuring element, and the monitor element.

12. The semiconductor laser device according to claim 1, wherein:

the semiconductor laser element is configured to output optical power at a

level equal to or greater than 250 mW.

13. The semiconductor laser device according to claim 3, wherein:

the carrier is configured to maintain a difference between an actual laser element temperature and a measured laser element temperature less than or equal to 22.5 degrees C when the semiconductor laser element is driven so as to have a calorific value of 3.5(W).

14. The semiconductor laser device according to claim 3, wherein:

the carrier is configured to enable the semiconductor laser element to output at least 410 mW of optical power without saturating when injected with an injection current of 1500 mA.

15. A semiconductor laser device comprising:

a carrier configured to have an insulating characteristic and a high heat conductivity;

a submount formed by a heat sink having a heat conductivity equal to or greater than 500 W/(m · K) and joined to the carrier through a first multi-layer film;

a second multi-layer film including a gold thin film mounted on the submount;

a third multi-layer film including a gold thin film mounted on the carrier;

a semiconductor laser element having a p-side electrode, an n-side electrode, and an end-face, configured to emit a laser beam, and mounted on the second multi-layer film via the p-side electrode; and

a temperature measuring element having a first-side and a second-side, configured to measure a temperature of the semiconductor laser element, and mounted on the second multi-layer film via the second-side, wherein

the semiconductor laser element and the temperature measuring element are placed in a proximity to facilitate a transfer of heat from the laser element p-side to the measuring element second-side.

16. The semiconductor laser device according to claim 15, wherein:

the submount comprises diamond.

17. The semiconductor laser device according to claim 16, wherein:

the second multi-layer film is configured to form a conductor pattern having a laser mount portion, a measuring element mount portion, a laser n-side portion, and a measuring element first-side portion,

the third multi-layer film is arranged to form a electrical conducting pattern having an other laser mount portion, an other measuring element mount portion, an other laser n-side portion, and an other measuring element first-side portion,

the semiconductor laser element n-side electrode is connected to the laser n-side portion via a first conductive connection,

the laser mount portion is connected to the other laser mount portion via a second conductive connection,

the laser n-side portion is connected to the other laser n-side portion via a third conductive connection,

the temperature measuring element first-side is connected to the measuring element first-side portion via a fourth conductive connection,

the measuring element first-side portion is connected to the other measuring element first-side portion via a fifth conductive connection, and

the measuring element mount portion is connected to the other measuring element mount portion via a sixth conductive connection.

18. The semiconductor laser device according to claim 17, wherein:

the first conductive correction, second conductive correction and third conductive connection comprises a respective first plurality, second plurality and third plurality of conductive wires,

the first plurality, second plurality and third plurality of conductive wires are each configured to be joined at substantially equal intervals on the respective semiconductor laser element n-side electrode, the laser n-side portion, and other laser n-side portion.

19. The semiconductor laser device according to claim 17, wherein:

the laser n-side portion is placed on a portion of the carrier closest to the laser

device end-face.

20. The semiconductor laser device according to claim 17, wherein:

the laser n-side portion is placed on a portion of the carrier opposite to the laser device end-face.

21. The semiconductor laser device according to claim 15, wherein:

the gold thin film has a thickness equal to or greater than 5 μm.

22. The semiconductor laser device according to claim 15, further comprising:

a monitor element mounted on the carrier to monitor the laser beam.

23. The semiconductor laser device according to claim 15, wherein:

a resonator length of the semiconductor laser element is equal to or greater than 1,000 μm.

24. The semiconductor laser device according to claim 22, wherein:

at least one of the semiconductor laser element, the temperature measuring element, and the monitor element is electrically independent from an other one of semiconductor laser element, the temperature measuring element, and the monitor element.

25. The semiconductor laser device according to claim 15, wherein:

the semiconductor laser element is configured to have an output power equal to or greater than 250 mW.

26. The semiconductor laser device according to claim 16, wherein:

the diamond submount is configured to minimize heat resistance relative to a semiconductor laser element length, width and thickness.

27. The semiconductor laser device according to claim 26, wherein:

the diamond submount has a thickness of at least 0.4 mm, a length of at least 3.2 mm and a width of at least 3.2 mm when the semiconductor laser element has a thickness of not more than 0.13 mm, a length of not more than 2.0 mm and a width of not more than 0.35 mm

28. The semiconductor laser device according to claim 26, wherein:

the diamond submount has a thickness of at least 0.3 mm, a length of at least 2.7 mm and a width of at least 1.0 mm when the semiconductor laser element has a thickness of not more than 0.13 mm, a length of not more than 2.0 mm and a width of not more than 0.35 mm

29. The semiconductor laser device according to claim 16, wherein:

the diamond submount comprises a polycrystal diamond.

30. A semiconductor laser device comprising:

a carrier configured to have an insulating characteristic, a high heat conductivity and a conductor rod with a rod thermal conductivity higher than a thermal conductivity of the carrier;

a multi-layer film including a gold thin film mounted on the carrier;

a semiconductor laser element having a p-side electrode, an n-side electrode, and an end-face, configured to emit a laser beam, and mounted on the multi-layer film via the p-side electrode;

a temperature measuring element having a temperature measuring element first-side and a temperature measuring element second-side, configured to measure a driving temperature of the semiconductor laser element, and mounted on the multi-layer film via the temperature measuring element second-side; and

a laser monitoring element having a laser monitoring element first-side and a laser monitoring element second-side, configured to monitor the laser beam, and mounted on the multi-layer film via the laser monitoring element second-side, wherein

the semiconductor laser element and the temperature measuring element are placed in a proximity to facilitate a transfer of heat from the laser element p-side to the measuring element second-side.

31. The semiconductor laser device according to claim 30, wherein:

the carrier comprises at least one of a Si, AlN, diamond and cBN polycrystal material.

32. The semiconductor laser device according to claim 31, wherein:

the multi-layer film is arranged to form a electrical conducting pattern having a laser mount portion, a measuring element mount portion, a laser monitoring element mount portion, a laser n-side portion, a measuring element first-side portion, and a laser monitoring element first-side portion, wherein

the semiconductor laser element n-side electrode is connected to the laser n-side portion via a first conductive connection,

the temperature measuring element first-side is connected to the measuring element first-side portion via a second conductive connection, and

the laser monitoring element first-side is connected to the laser monitoring element first-side portion via a third conductive connection.

33. The semiconductor laser device according to claim 32, wherein:

the first conductive connection comprises a plurality of conductive wires; and

the plurality of conductive wires are joined at substantially equal intervals on the laser n-side portion of the semiconductor laser element.

34. The semiconductor laser device according to claim 32, wherein:

the laser n-side portion is placed on a portion of the carrier closest to the laser device end-face.

35. The semiconductor laser device according to claim 32, wherein:

the laser n-side portion is placed on a portion of the carrier opposite to the laser device end-face.

36. The semiconductor laser device according to claim 30, wherein:

the gold thin film has a thickness equal to or greater than 5 μm.

37. The semiconductor laser device according to claim 30, further comprising:

a diamond submount interposed between the carrier and the semiconductor laser element, the temperature measure element and the laser monitoring element, wherein

the diamond submount is joined to the carrier by a multi-layer film including a gold thin film, and

the semiconductor laser element, the temperature measure element and the laser monitoring element are each joined to the diamond submount by a multi-layer film including a gold thin film.

38. The semiconductor laser device according to claim 30, wherein:

a resonator length of the semiconductor laser element is equal to or greater than 1,000 μm.

39. The semiconductor laser device according to claim 37, wherein:

at least one of the semiconductor laser element, the temperature measuring element, and the monitor element is electrically independent from an other one of semiconductor laser element, the temperature measuring element, and the monitor element.

40. The semiconductor laser device according to claim 30, wherein:

the semiconductor laser element is configured to have an output power equal to or greater than 250 mW.

41. A semiconductor laser device comprising:

a carrier configured to have an insulating characteristic and a high heat conductivity;

a submount formed by a heat sink having a heat conductivity equal to or greater than 500 W/(m · K) and joined to the carrier through a first multi-layer film;

a second multi-layer film including a gold thin film mounted on the submount;

a third multi-layer film including a gold thin film mounted on the carrier;

a semiconductor laser element having a p-side electrode, an n-side electrode, and an end-face, configured to emit a laser beam, and mounted on the second multi-layer film via the p-side electrode; and

a temperature measuring element having a first-side and a second-side, configured to measure a temperature of the semiconductor laser element, and mounted on the third multi-layer film via the second-side, wherein

the semiconductor laser element and the temperature measuring element are placed in a proximity to facilitate a transfer of heat from the laser element p-side to the measuring element second-side.

42. The semiconductor laser device according to claim 41, wherein:

the submount comprises a diamond.

43. The semiconductor laser device according to claim 42, wherein:

the second multi-layer film is configured to form a conductor pattern having a laser mount portion; and

the third multi-layer film is arranged in a pattern to conduct heat and having an other laser mount portion, a measuring element mount portion, a laser n-side portion, and a measuring element first-side portion, wherein

the semiconductor laser element n-side electrode is connected to the laser n-side portion via a first conductive connection,

the laser mount portion is connected to the other laser mount portion via a second conductive connection, and

the temperature measuring element first-side is connected to the measuring element first-side portion via a third conductive connection.

44. The semiconductor laser device according to claim 43, wherein:

the first conductive connection and second conductive connection comprises a respective first plurality and second plurality of conductive wires,

the first plurality and second plurality of conductive wires are each configured to be joined at substantially equal intervals on the respective semiconductor laser

element n-side electrode, the laser n-side portion, and other laser n-side portion.

45. The semiconductor laser device according to claim 41, wherein:

the gold thin film has a thickness equal to or greater than 5 μm.

46. The semiconductor laser device according to claim 41, further comprising:

a monitor element mounted on the carrier to monitor the laser beam.

47. The semiconductor laser device according to claim 41, wherein:

a resonator length of the semiconductor laser element is equal to or greater than 1,000 μm.

48. The semiconductor laser device according to claim 46, wherein:

at least one of the semiconductor laser element, the temperature measuring element, and the monitor element is electrically independent from an other one of semiconductor laser element, the temperature measuring element, and the monitor element.

49. The semiconductor laser device according to claim 41, wherein:

the semiconductor laser element is configured to have an output power equal to or greater than 250 mW.

50. The semiconductor laser device according to claim 43, wherein

the carrier is configured to enable the semiconductor laser element to output essentially 440 mW of power without saturating when injected with an injection current of 1500 mA.

51. A semiconductor laser device comprising:

a carrier configured to have an insulating characteristic and a high heat conductivity;

a diamond submount covered with a metallic thin film and joined to the carrier

through a first multi-layer film;

a second multi-layer film including a gold thin film mounted on the submount;

a third multi-layer film including a gold thin film mounted on the carrier;

a semiconductor laser element configured to emit a laser beam, mounted on the second multi-layer film via the p-side electrode, and having a p-side electrode, an n-side electrode, and an end-face; and

a temperature measuring element having a first-side and a second-side, configured to measure a temperature of the semiconductor laser element, and mounted on the third multi-layer film via the second-side, wherein

the semiconductor laser element and the temperature measuring element are placed in a proximity to facilitate a transfer of heat from the laser element p-side to the measuring element second-side.

52. The semiconductor laser device according to claim 51, wherein:

the second multi-layer film is configured to form a conductor pattern having a laser mount portion;

the third multi-layer film is configured to form a conductor pattern having a measuring element mount portion, a laser n-side portion, at least one of a laser p-side portion and a sub-mount mount portion, and a measuring element first-side portion;

the semiconductor laser element n-side electrode is connected to the laser n-side portion via a first conductive connection; and

the temperature measuring element first-side connects to the measuring element first-side portion via a second conductive connection.

53. The semiconductor laser device according to claim 52, wherein:

the first conductive connection comprises a plurality of conductive wires; and

the plurality of conductive wires are each configured to be joined at essentially equal intervals on the respective semiconductor laser element n-side electrode and the laser n-side portion.

54. The semiconductor laser device according to claim 51, wherein:

the gold thin film has a thickness equal to or greater than 5 μm.

55. The semiconductor laser device according to claim 51, further comprising:

a monitor element mounted on the carrier to monitor the laser beam.

56. The semiconductor laser device according to claim 51, wherein:

a resonator length of the semiconductor laser element is equal to or greater than 1,000 μm.

57. The semiconductor laser device according to claim 55, wherein:

at least one of the semiconductor laser element, the temperature measuring element, and the monitor element is electrically independent from an other one of semiconductor laser element, the temperature measuring element, and the monitor element.

58. The semiconductor laser device according to claim 51, wherein:

the semiconductor laser element is configured to have an output power equal to or greater than 250 mW.

59. A semiconductor laser module, comprising:

a laser housing having a housing floor;

a peltier module mounted on the housing floor;

a base mounted on the peltier module;

a semiconductor laser device mounted on the base and having

a carrier configured to have an insulating characteristic and a high heat conductivity,

a multi-layer film including a gold thin film mounted on the carrier,

a semiconductor laser element having a p-side electrode, an n-side electrode, and an end-face, configured to emit a laser beam, and mounted on the multi-layer film via the p-side electrode, and

a temperature measuring element having a first-side and a second-side, configured to measure a temperature of the semiconductor laser

element, and mounted on the multi-layer film via the second-side, wherein

the semiconductor laser element and the temperature measuring element are placed in a proximity to facilitate a transfer of heat from the laser element p-side to the measuring element second-side without use of a submount;

a first lens mounted on the base;

an isolator and a second lens mounted in the package; and

an optical fiber.

60. The semiconductor laser module according to claim 59, wherein:

the carrier comprises at least one of a Si, AIN, diamond and cBN polycrystal material.

61. The semiconductor laser module according to claim 60, wherein:

the multi-layer film is arranged to form a conductor pattern having a laser mount portion, a measuring element mount portion, a laser n-side portion, and a measuring element first-side portion;

the semiconductor laser element n-side electrode connects to the laser n-side portion via a conductive connection; and

the temperature measuring element first-side connects to the measuring element first-side portion via an other conductive connection.

62. A semiconductor laser module, comprising:

a laser housing having a housing floor;

a peltier module mounted on the housing floor;

a base mounted on the peltier module;

a semiconductor laser device mounted on the base and having

a carrier configured to have an insulating characteristic and a high heat conductivity,

a submount formed by a heat sink having a heat conductivity equal to or greater than 500 W/(m · K) and joined to the carrier through a first multi-layer film,

a second multi-layer film including a gold thin film mounted on the submount,

a third multi-layer film including a gold thin film mounted on the carrier,

a semiconductor laser element having a p-side electrode, an n-side electrode, and an end-face, configured to emit a laser beam, and mounted on the second multi-layer film via the p-side electrode, and

a temperature measuring element having a first-side and a second-side, configured to measure a temperature of the semiconductor laser element, and mounted on the second multi-layer film via the second-side, wherein

the semiconductor laser element and the temperature measuring element are placed in a proximity to facilitate a transfer of heat from the laser element p-side to the measuring element second-side;

a first lens mounted on the base;

an isolator and a second lens mounted in the package; and

an optical fiber.

63. The semiconductor laser module according to claim 62, wherein:

the submount comprises a diamond.

64. The semiconductor laser module according to claim 63, wherein:

the second multi-layer film is arranged to form a conductor pattern having a laser mount portion, a measuring element mount portion, a laser n-side portion, and a measuring element first-side portion;

the third multi-layer film is configured to form a conductor pattern having an other laser mount portion, an other measuring element mount portion, an other laser n-side portion, and an other measuring element first-side portion,

the semiconductor laser element n-side electrode connects to the laser n-side portion via a first conductive connection;

the laser mount portion connects to the other laser mount portion via a second conductive connection;

the laser n-side portion connects to the other laser n-side portion via a third

conductive connection;

the temperature measuring element first-side connects to the measuring element first-side portion via a fourth conductive connection;

the measuring element first-side portion connects to the other measuring element first-side portion via a fifth conductive connection; and

the measuring element mount portion connects to the other measuring element mount portion via a sixth conductive connection.

65. A semiconductor laser module, comprising:

a laser housing having a housing floor;

a peltier module mounted on the housing floor;

a base mounted on the peltier module;

a semiconductor laser device mounted on the base and having

a carrier configured to have an insulating characteristic, a high heat conductivity and a conductor rod configured to have a rod thermal conductivity higher than a thermal conductivity of the carrier,

a multi-layer film including a gold thin film mounted on the carrier,

a semiconductor laser element having a p-side electrode, an n-side electrode, and an end-face, configured to emit a laser beam, and mounted on the multi-layer film via the p-side electrode,

a temperature measuring element having a temperature measuring element first-side and a temperature measuring element second-side, configured to measure a temperature of the semiconductor laser element, and mounted on the multi-layer film via the temperature measuring element second-side, and

a laser monitoring element having a laser monitoring element first-side and a laser monitoring element second-side, configured to monitor the laser beam, and mounted on the multi-layer film via the laser monitoring element second-side, wherein

the semiconductor laser element and the temperature measuring element are placed in a proximity to facilitate a transfer of heat from the laser element p-side to the measuring element second-side without a

submount;

a first lens mounted on the base;

an isolator and a second lens mounted in the package; and

an optical fiber.

66. The semiconductor laser module according to claim 65, wherein:

the carrier comprises at least one of a Si, AIN, diamond and cBN polycrystal material.

67. The semiconductor laser module according to claim 66, wherein:

the multi-layer film is arranged to form a conductor pattern having a laser mount portion, a measuring element mount portion, a laser monitoring element mount portion, a laser n-side portion, a measuring element first-side portion and, a laser monitoring element first-side portion;

the semiconductor laser element n-side electrode connects to the laser n-side portion via a first conductive connection;

the temperature measuring element first-side connects to the measuring element first-side portion via a second conductive connection; and

the laser monitoring element first-side connects to the laser monitoring element first-side portion via a third conductive connection.

68. A semiconductor laser module, comprising:

a laser housing having a housing floor;

a peltier module mounted on the housing floor;

a base mounted on the peltier module;

a semiconductor laser device mounted on the base and having

a carrier configured to have an insulating characteristic and a high heat conductivity,

a submount formed by a heat sink having a heat conductivity equal to or greater than 500 W/(m · K) and joined to the carrier through a first multi-layer film,

a second multi-layer film including a gold thin film mounted on the

submount,

a third multi-layer film including a gold thin film mounted on the carrier,

a semiconductor laser element having a p-side electrode, an n-side electrode, and an end-face, configured to emit a laser beam, and mounted on the second multi-layer film via the p-side electrode, and

a temperature measuring element having a first-side and a second-side, configured to measure a temperature of the semiconductor laser element, and mounted on the third multi-layer film via the second-side, wherein

the semiconductor laser element and the temperature measuring element are placed in a proximity to facilitate a transfer of heat from the laser element p-side to the measuring element second-side;

a first lens mounted on the base;

an isolator and a second lens mounted in the package; and

an optical fiber.

69. The semiconductor laser module according to claim 68, wherein:

the submount comprises a diamond.

70. The semiconductor laser module according to claim 69, wherein:

the second multi-layer film is arranged to form a conductor pattern having a laser mount portion;

the third multi-layer film is configured to form a conductor pattern having an other laser mount portion, a measuring element mount portion, a laser n-side portion, and a measuring element first-side portion;

the semiconductor laser element n-side electrode connects to the laser n-side portion via a first conductive connection;

the laser mount portion connects to the other laser mount portion via a second conductive connection; and

the temperature measuring element first-side connects to the measuring element first-side portion via a third conductive connection.

71. A semiconductor laser module, comprising:

a laser housing having a housing floor;

a peltier module mounted on the housing floor;

a base mounted on the peltier module;

a semiconductor laser device mounted on the base and having

a carrier configured to have an insulating characteristic and a high heat conductivity,

a diamond submount covered with a metallic thin film and joined to the carrier through a first multi-layer film,

a second multi-layer film including a gold thin film mounted on the submount,

a third multi-layer film including a gold thin film mounted on the carrier,

a semiconductor laser element configured to emit a laser beam, mounted on the second multi-layer film via the p-side electrode, and having a p-side electrode, an n-side electrode, and an end-face, and

a temperature measuring element having a first-side and a second-side, configured to measure a temperature of the semiconductor laser element, and mounted on the third multi-layer film via the second-side, wherein

the semiconductor laser element and the temperature measuring element are placed in a proximity to facilitate a transfer of heat from the laser element p-side to the measuring element second-side;

a first lens mounted on the base;

an isolator and a second lens mounted in the package; and

an optical fiber.

72. The semiconductor laser module according to claim 71, wherein:

the second multi-layer film is configured to form a conductor pattern having a laser mount portion;

the third multi-layer film is configured to form a conductor pattern having a measuring element mount portion, a laser n-side portion, at least one of a laser p-side portion and a sub-mount mount portion, and a measuring element first-side portion,

the semiconductor laser element n-side electrode connects to the laser n-side portion via a first conductive connection; and

the temperature measuring element first-side connects to the measuring element first-side portion via a second conductive connection.

73. A semiconductor laser device comprising:

a carrier configured to have an insulating characteristic and a high heat conductivity;

a first and a second multi-layer film including a gold thin film mounted on the carrier;

a semiconductor laser element mounted on the first multi-layer film;

a temperature measuring element mounted on the second multi-layer film;

means for emitting a laser beam; and

means for measuring and controlling a temperature of the semiconductor laser element, wherein

a number of thermal interfaces between the semiconductor laser element and temperature measuring element is one of two and three.

74. The semiconductor laser device according to claim 73, wherein:

the carrier comprises at least one of a Si, AIN, diamond and cBN polycrystal material.

75. The semiconductor laser device according to claim 74, wherein:

the carrier comprises a thermal conducting rod having a rod thermal conductivity higher than a thermal conductivity of the carrier.

76. The semiconductor laser device according to claim 74, further comprising:

a common submount formed by a heat sink having a heat conductivity equal to or greater than 500 W/(m · K) interposed between the semiconductor laser element and the first multi-layer film and between the temperature monitoring device and the second multi-layer film.

77. The semiconductor laser device according to claim 76, wherein:
the common submount comprises a diamond.

78. The semiconductor laser device according to claim 74, further comprising:
an optical monitor mounted on the carrier via an optical carrier metallic film.

79. The semiconductor laser device according to claim 74, further comprising:
a submount formed by a heat sink having a heat conductivity equal to or greater than 500 W/(m · K) interposed between the semiconductor laser element and the first multi-layer film.

80. The semiconductor laser device according to claim 79, wherein:
the submount comprises a diamond.

81. The semiconductor laser device according to claim 80, wherein:
the submount is covered with a metallic thin film.

82. A semiconductor laser module, comprising:
a laser housing having a housing floor;
a peltier module mounted on the housing floor;
a base mounted on the peltier module;
a semiconductor laser device mounted on the base and having
a carrier configured to have an insulating characteristic and a high heat conductivity,
a first and a second multi-layer film including a gold thin film mounted on the carrier,
a semiconductor laser element mounted on the first multi-layer film,
a temperature measuring element mounted on the second multi-

layer film, wherein

a number of thermal interfaces between the semiconductor laser element and temperature measuring element is one of two and three;

a first lens mounted on the base;

an isolator and a second lens mounted in the package;

an optical fiber;

means for emitting a laser beam;

means for measuring and controlling a temperature of the semiconductor laser element; and

means for using a measured temperature to control an output power of the semiconductor laser element.

83. The semiconductor laser module according to claim 81, wherein:

the carrier comprises at least one of a Si, AIN, diamond and cBN polycrystal material.

84. The semiconductor laser module according to claim 82, wherein:

the carrier comprises a thermal conducting rod having a rod thermal conductivity higher than a thermal conductivity of the carrier.

85. The semiconductor laser module according to claim 82, further comprising:

a common submount formed by a heat sink having a heat conductivity equal to or greater than 500 W/(m · K) interposed between the semiconductor laser element and the first multi-layer film and between the temperature monitoring device and the second multi-layer film.

86. The semiconductor laser module according to claim 85, wherein:

the common submount comprises a diamond.

87. The semiconductor laser module according to claim 82, further comprising:

an optical monitor mounted on the carrier via an optical carrier metallic film.

88. The semiconductor laser module according to claim 82, further comprising:

a submount formed by a heat sink having a heat conductivity equal to or greater than 500 W/(m • K) interposed between the semiconductor laser element and the first multi-layer film.

89. The semiconductor laser module according to claim 88, wherein:

the submount comprises a diamond.

90. The semiconductor laser module according to claim 89, wherein:

the submount is covered with a metallic thin film.